CLAIMS:

1. A method of operating a light source (100) including a ballast (110) in electrical communication with a lamp (120), said method comprising:

operating the ballast (110) to determine (920) a first average lamp power to be applied to the lamp (120) during a first data period;

operating the ballast (110) to generate and communicate (930) a first pulse width modulated drive signal to the lamp (120) during the first data period, the first pulse width modulated drive signal having one of a first waveform and a second waveform for applying the first average lamp power to the lamp (120), the first waveform including at least one pulse representative of a first data bit, the second waveform including at least one pulse representative of a second data bit; and

operating the lamp (120) to emit (940) a first modulated light output in response to a reception of the first pulse width modulated drive signal during the first data period, the first modulated light output being representative of the first data bit in response to the first pulse width modulated drive signal having the first waveform, the first modulated light output being representative of the second data bit in response to the first pulse width modulated drive signal having the second waveform.

2. The method of claim 1, further comprising:

operating the ballast (110) to determine a second average lamp power to be applied to the lamp (120) during a second data period;

operating the ballast (110) to generate and communicate a second pulse width modulated drive signal to the lamp (120) during the second data period, the second pulse width modulated drive signal having one of a third waveform and a fourth waveform for applying the second average lamp power to the lamp (120), the third waveform including at least one pulse representative of the first data bit, the fourth waveform including at least one pulse representative of the second data bit; and

operating the lamp (120) to emit a second modulated light output in response to a reception of the second pulse width modulated drive signal during the second data period, the second modulated light output being representative of the first data bit in response to the second pulse width modulated drive signal having the third waveform, the second

modulated light output being representative of the second data bit in response to the second pulse width modulated drive signal having the fourth waveform.

3. The method of claim 1,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having the first duty cycle during the second portion of the first data period and the second set of at least one pulse having the second duty cycle during the first portion of the first data period.

4. The method of claim 1,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having the first duty cycle during a third portion of the first data period and the second set of at least one pulse having the second duty cycle during a fourth portion of the first data period.

5. The method of claim 1,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes a second set of at least one pulse having a second duty cycle during the first data period.

6. A light source (100), comprising:

a lamp (120);

a ballast (110) in electrical communication with said lamp (120);

wherein said ballast (110) is operable to determine a first average lamp power to be applied to said lamp (120) during a first data period,

wherein said ballast (110) is operable to generate and communicate a first pulse width modulated drive signal to said lamp (120) during the first data period, the first pulse width modulated drive signal having one of a first waveform and a second waveform for applying the first average lamp power to the lamp (120), the first waveform including at least one pulse representative of a first data bit, the second waveform including at least one pulse representative of a second data bit; and

wherein said lamp (120) is operable to emit a first modulated light output in response to a reception of the first pulse width modulated drive signal during the first data period, the first modulated light output being representative of the first data bit in response to the first pulse width modulated drive signal having the first waveform, the first modulated light output being representative of the second data bit in response to the first pulse width modulated drive signal having the second waveform.

7. The light source (100) of claim 6,

wherein said ballast (110) is operable to determine a second average lamp power to be applied to said lamp (120) during a second data period,

wherein said ballast (110) is operable to generate and communicate a second pulse width modulated drive signal to the lamp (120) during the second data period, the second pulse width modulated drive signal having one of a third waveform and a fourth waveform for applying the second average lamp power to the lamp (120), the third waveform including at least one pulse representative of the first data bit, the fourth waveform including at least one pulse representative of the second data bit; and

wherein said lamp (120) is operable to emit a second modulated light output in response to a reception of the second pulse width modulated drive signal during the second data period, the second modulated light output being representative of the first data bit in response to the second pulse width modulated drive signal having the third waveform, the second modulated light output being representative of the second data bit in response to the second pulse width modulated drive signal having the fourth waveform.

8. The light source (100) of claim 6,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having the first duty cycle during the second portion of the first data period and the second set of at least one pulse having the second duty cycle during the first portion of the first data period.

9. The light source (100) of claim 6,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having the first duty cycle during a third portion of the first data period and the second set of at least one pulse having the second duty cycle during a fourth portion of the first data period.

10. The light source (100) of claim 6,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having a second duty cycle during the first data period.

11. A light source (100), comprising:

a lamp (120); and

a ballast (110) in electrical communication with said lamp (120), wherein said ballast (110) includes

computer readable code to determine a first average lamp power to be applied to said lamp (120) during a first data period, and

computer readable code to generate and communicate a first pulse width modulated drive signal to said lamp (120) during the first data period, the first pulse width modulated drive signal having one of a first waveform and a second waveform for applying the first average lamp power to the lamp (120), the first waveform including at least one pulse representative of a first data bit, the second waveform including at least one pulse representative of a second data bit;

wherein said lamp (120) is operable to emit a first modulated light output in response to a reception of the first pulse width modulated drive signal during the first data period, the first modulated light output being representative of the first data bit in response to the first pulse width modulated drive signal having the first waveform, the first modulated light output being representative of the second data bit in response to the first pulse width modulated drive signal having the second waveform.

12. The light source (100) of claim 11,

wherein said ballast (110) further includes computer readable code to determine a second average lamp power to be applied to said lamp (120) during a second data period,

wherein said ballast (110) further includes computer readable code to generate and communicate a second pulse width modulated drive signal to the lamp (120) during the second data period, the second pulse width modulated drive signal having one of a third waveform and a fourth waveform for applying the second average lamp power to the lamp (120), the third waveform including at least one pulse representative of the first data bit, the fourth waveform including at least one pulse representative of the second data bit; and

wherein said lamp (120) is operable to emit a second modulated light output in response to a reception of the second pulse width modulated drive signal during the second data period, the second modulated light output being representative of the first data bit in response to the second pulse width modulated drive signal having the third waveform, the second modulated light output being representative of the second data bit in response to the second pulse width modulated drive signal having the fourth waveform.

13. The light source (100) of claim 11,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having the first duty cycle during the second portion of the first data period and the second set of at least one pulse having the second duty cycle during the first portion of the first data period.

14. The light source (100) of claim 11,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during a first portion of the first data period and a second set of at least one pulse having a second duty cycle during a second portion of the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated

drive signal includes the first set of at least one pulse having the first duty cycle during a third portion of the first data period and the second set of at least one pulse having the second duty cycle during a fourth portion of the first data period.

15. The light source (100) of claim 11,

wherein, when the first pulse width modulated drive signal is generated as having the first waveform during the first data period, the first pulse width modulated drive signal includes a first set of at least one pulse having a first duty cycle during the first data period; and

wherein, when the first pulse width modulated drive signal is generated as having the second waveform during the first data period, the first pulse width modulated drive signal includes the first set of at least one pulse having a second duty cycle during the first data period.